

01-21-00

Practitioner's Docket No. 991025**PATENT**

## Preliminary Classification:

Proposed Class:

Subclass:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129.'" M.P.E.P. § 601, 7th ed.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Box Patent Application**  
**Assistant Commissioner for Patents**  
**Washington, D.C. 20231**

**NEW APPLICATION TRANSMITTAL**

Transmitted herewith for filing is the patent application of

Inventor(s): Paul Entwistle

**WARNING:** 37 C.F.R. § 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(i) is filed supplying or changing the name or names of the inventor or inventors."

For (title): IMPROVEMENT RELATING TO TELEVISION GUIDE SYSTEM

**CERTIFICATION UNDER 37 C.F.R. § 1.10\***

(Express Mail label number is mandatory.)

(Express Mail certification is optional.)

I hereby certify that this New Application Transmittal and the documents referred to as attached therein are being deposited with the United States Postal Service on this date 1-20-00, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number EL197551046US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Tonya Williams

(type or print name of person mailing paper)

Tonya Williams

Signature of person mailing paper

**WARNING:** Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. § 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

**\*WARNING:** Each paper or fee filed by "Express Mail" **must** have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

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jc759 U.S. PTO  
 01/20/00

A  
 jc525 U.S. PTO  
 09/488183  
 01/20/00

## 1. Type of Application

This new application is for a(n)

(check one applicable item below)

- ☒ Original (nonprovisional)  
☐ Design  
☐ Plant

**WARNING:** Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. § 371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application.

**WARNING:** Do not use this transmittal for the filing of a provisional application.

**NOTE:** If one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION.

- ☐ Divisional.  
☐ Continuation.  
☐ Continuation-in-part (C-I-P).

## 2. Benefit of Prior U.S. Application(s) (35 U.S.C. §§ 119(e), 120, or 121)

**NOTE:** A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. § 112. Each prior application must also be:

(i) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or

(ii) Complete as set forth in § 1.51(b); or

(iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or

(iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(f) within the time period set forth in § 1.53(f).

37 C.F.R. § 1.78(a)(1).

**NOTE:** If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

**WARNING:** If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120, 121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

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**WARNING:** When the last day of pendency of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 C.F.R. § 1.78(a)(3). U.K.

☒ The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

### 3. Papers Enclosed

A. Required for filing date under 37 C.F.R. § 1.53(b) (Regular) or 37 C.F.R. § 1.153 (Design) Application

8 Pages of specification

3 Pages of claims

2 Sheets of drawing

**WARNING:** DO NOT submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments on proposed then-new 37 C.F.R. § 1.84, see Notice of March 9, 1988 (1990 O.G. 57-62).

**NOTE:** "Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm. (5/8 inch) down from the top of the page . . ." 37 C.F.R. § 1.84(c)).

(complete the following, if applicable)

☐ The enclosed drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. § 1.84(b).

☒ formal

☐ informal

B. Other Papers Enclosed

2 Pages of declaration and power of attorney

1 Pages of abstract

2 Other Assignment

### 4. Additional papers enclosed

☐ Amendment to claims

☐ Cancel in this applications claims \_\_\_\_\_ before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)

☐ Add the claims shown on the attached amendment. (Claims added have been numbered consecutively following the highest numbered original claims.)

☒ Preliminary Amendment

☒ Information Disclosure Statement (37 C.F.R. § 1.98)

☒ Form PTO-1449 (PTO/SB/08A and 08B)

☐ Citations

- ☐ Declaration of Biological Deposit
- ☐ Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.
- ☐ Authorization of Attorney(s) to Accept and Follow Instructions from Representative
- ☐ Special Comments
- ☐ Other

##### 5. Declaration or oath (including power of attorney)

**NOTE:** A newly executed declaration is not required in a continuation or divisional application provided that the prior nonprovisional application contained a declaration as required, the application being filed is by all or fewer than all the inventors named in the prior application, there is no new matter in the application being filed, and a copy of the executed declaration filed in the prior application (showing the signature or an indication thereon that it was signed) is submitted. The copy must be accompanied by a statement requesting deletion of the names of person(s) who are not inventors of the application being filed. If the declaration in the prior application was filed under § 1.47, then a copy of that declaration must be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning person under § 1.47 has subsequently joined in a prior application, then a copy of the subsequently executed declaration must be filed. See 37 C.F.R. §§ 1.63(d)(1)–(3).

**NOTE:** A declaration filed to complete an application must be executed, identify the specification to which it is directed, identify each inventor by full name including family name and at least one given name, without abbreviation together with any other given name or initial, and the residence, post office address and country or citizenship of each inventor, and state whether the inventor is a sole or joint inventor. 37 C.F.R. § 1.63(a)(1)–(4).

**NOTE:** "The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.62, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(i) is filed supplying or changing the name or names of the inventor or inventors." 37 C.F.R. § 1.41(a)(1).

☒ Enclosed

Executed by

(check all applicable boxes)

☒ inventor(s).

☐ legal representative of inventor(s).  
37 C.F.R. §§ 1.42 or 1.43.

☐ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.

☐ This is the petition required by 37 C.F.R. § 1.47 and the statement required by 37 C.F.R. § 1.47 is also attached. See item 13 below for fee.

☐ Not Enclosed.

**NOTE:** Where the filing is a completion in the U.S. of an International Application or where the completion of the U.S. application contains subject matter in addition to the International Application, the application may be treated as a continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.

☐ Application is made by a person authorized under 37 C.F.R. § 1.41(c) on behalf of all the above named inventor(s).

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(The declaration or oath, along with the surcharge required by 37 C.F.R. § 1.16(e) can be filed subsequently).

- ☐ Showing that the filing is authorized.  
(not required unless called into question. 37 C.F.R. § 1.41(d))

## 6. Inventorship Statement

**WARNING:** If the named inventors are each not the inventors of all the claims an explanation, including the ownership of the various claims at the time the last claimed invention was made, should be submitted.

The inventorship for all the claims in this application are:

☒ The same.

or

- ☐ Not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made,  
☐ is submitted.  
☐ will be submitted.

## 7. Language

**NOTE:** An application including a signed oath or declaration may be filed in a language other than English. An English translation of the non-English language application and the processing fee of \$130.00 required by 37 C.F.R. § 1.17(k) is required to be filed with the application, or within such time as may be set by the Office. 37 C.F.R. § 1.52(d).

- ☒ English  
☐ Non-English  
☐ The attached translation includes a statement that the translation is accurate. 37 C.F.R. § 1.52(d).

## 8. Assignment

- ☒ An assignment of the invention to Pace Micro Technology Plc  
Victoria Road, Saltaire, Shipley, BD 18 3LF, England  
☒ is attached. A separate ☒ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.  
☐ will follow.

**NOTE:** "If an assignment is submitted with a new application, send two separate letters—one for the application and one for the assignment." Notice of May 4, 1990 (1114 O.G. 77-78).

**WARNING:** A newly executed "CERTIFICATE UNDER 37 C.F.R. § 3.73(b)" must be filed when a continuation-in-part application is filed by an assignee. Notice of April 30, 1993, 1150 O.G. 62-64.

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**9. Certified Copy**

Certified copy(ies) of application(s)

GB	9903220.3	12 February 1999
Country	Appl. No.	Filed
Country	Appl. No.	Filed
Country	Appl. No.	Filed

from which priority is claimed

☐ is (are) attached.☒ will follow.

NOTE: The foreign application forming the basis for the claim for priority must be referred to in the oath or declaration. 37 C.F.R. § 1.55(a) and 1.63.

NOTE: This item is for any foreign priority for which the application being filed directly relates. If any parent U.S. application or International Application from which this application claims benefit under 35 U.S.C. § 120 is itself entitled to priority from a prior foreign application, then complete item 18 on the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

**10. Fee Calculation (37 C.F.R. § 1.16)**A. ☒ Regular application

CLAIMS AS FILED			
Number filed	Number Extra	Rate	Basic Fee 37 C.F.R. § 1.16(a)
			<del>\$760.00</del> 690.
Total Claims (37 C.F.R. § 1.16(c))	7 - 20 =	×	\$ 18.00
Independent Claims (37 C.F.R. § 1.16(b))	2 - 3 =	×	\$ 78.00
Multiple dependent claim(s), if any (37 C.F.R. § 1.16(d))		+	\$260.00

- ☐ Amendment cancelling extra claims is enclosed.  
☐ Amendment deleting multiple-dependencies is enclosed.  
☐ Fee for extra claims is not being paid at this time.

NOTE: If the fees for extra claims are not paid on filing they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency. 37 C.F.R. § 1.16(d).

Filing Fee Calculation \$ 690.

B. ☐ Design application  
(\$310.00—37 C.F.R. § 1.16(f))

Filing Fee Calculation \$

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- C. ☐ Plant application  
(\$480.00—37 C.F.R. § 1.16(g))

Filing fee calculation

\$ \_\_\_\_\_

# 11. Small Entity Statement(s)

- ☐ Statement(s) that this is a filing by a small entity under 37 C.F.R. § 1.9 and 1.27 is (are) attached.

**WARNING:** "Status as a small entity must be specifically established in each application or patent in which the status is available and desired. Status as a small entity in one application or patent does not affect any other application or patent, including applications or patents which are directly or indirectly dependent upon the application or patent in which the status has been established. The refiling of an application under § 1.53 as a continuation, division, or continuation-in-part (including a continued prosecution application under § 1.53(d)), or the filing of a reissue application requires a new determination as to continued entitlement to small entity status for the continuing or reissue application. A nonprovisional application claiming benefit under 35 U.S.C. § 119(e), 120, 121, or 365(c) of a prior application, or a reissue application may rely on a statement filed in the prior application or in the patent if the nonprovisional application or the reissue application includes a reference to the statement in the prior application or in the patent or includes a copy of the statement in the prior application or in the patent and status as a small entity is still proper and desired. The payment of the small entity basic statutory filing fee will be treated as such a reference for purposes of this section." 37 C.F.R. § 1.28(a)(2).

**WARNING:** "Small entity status must not be established when the person or persons signing the . . . statement can unequivocally make the required self-certification." M.P.E.P., § 509.03, 6th ed., rev. 2, July 1996 (emphasis added).

(complete the following, if applicable)

- ☐ Status as a small entity was claimed in prior application  
\_\_\_\_\_ / \_\_\_\_\_, filed on \_\_\_\_\_, from which benefit  
is being claimed for this application under:  
35 U.S.C. § ☐ 119(e),  
☐ 120,  
☐ 121,  
☐ 365(c),

and which status as a small entity is still proper and desired.

- ☐ A copy of the statement in the prior application is included.

Filing Fee Calculation (50% of A, B or C above)

\$ \_\_\_\_\_

**NOTE:** Any excess of the full fee paid will be refunded if small entity status is established and a refund request are filed within 2 months of the date of timely payment of a full fee. The two-month period is not extendable under § 1.136. 37 C.F.R. § 1.28(a).

# 12. Request for International-Type Search (37 C.F.R. § 1.104(d))

(complete, if applicable)

- ☐ Please prepare an international-type search report for this application at the time when national examination on the merits takes place.

**13. Fee Payment Being Made at This Time**

☐ Not Enclosed

☐ No filing fee is to be paid at this time.

*(This and the surcharge required by 37 C.F.R. § 1.16(e) can be paid subsequently.)*

☒ Enclosed

☒ Filing fee

\$ 690

☒ Recording assignment

(\$40.00; 37 C.F.R. § 1.21(h))

(See attached "COVER SHEET FOR  
ASSIGNMENT ACCOMPANYING NEW  
APPLICATION".)

\$ 40

☐ Petition fee for filing by other than all the  
inventors or person on behalf of the inventor  
where inventor refused to sign or cannot be  
reached

(\$130.00; 37 C.F.R. §§ 1.47 and 1.17(l))

\$ \_\_\_\_\_

☐ For processing an application with a  
specification in

a non-English language

(\$130.00; 37 C.F.R. §§ 1.52(d) and 1.17(k))

\$ \_\_\_\_\_

☐ Processing and retention fee

(\$130.00; 37 C.F.R. §§ 1.53(d) and 1.21(l))

\$ \_\_\_\_\_

☐ Fee for international-type search report

(\$40.00; 37 C.F.R. § 1.21(e))

\$ \_\_\_\_\_

NOTE: 37 C.F.R. § 1.21(l) establishes a fee for processing and retaining any application that is abandoned for failing to complete the application pursuant to 37 C.F.R. § 1.53(f) and this, as well as the changes to 37 C.F.R. §§ 1.53 and 1.78(a)(1), indicate that in order to obtain the benefit of a prior U.S. application, either the basic filing fee must be paid, or the processing and retention fee of § 1.21(l) must be paid, within 1 year from notification under § 53(f).

Total fees enclosed

\$ 730

**14. Method of Payment of Fees**

☒ Check in the amount of \$ 730

☐ Charge Account No. \_\_\_\_\_ in the amount of  
\$ \_\_\_\_\_

A duplicate of this transmittal is attached.

NOTE: Fees should be itemized in such a manner that it is clear for which purpose the fees are paid. 37 C.F.R. § 1.22(b).

(New Application Transmittal [4-1]—page 8 of 11)



**15. Authorization to Charge Additional Fees**

**WARNING:** If no fees are to be paid on filing, the following items should not be completed.

**WARNING:** Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.

☒ The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 08-1500:

☒ 37 C.F.R. § 1.16(a), (f) or (g) (filing fees)

☒ 37 C.F.R. § 1.16(b), (c) and (d) (presentation of extra claims)

**NOTE:** Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. § 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.

☒ 37 C.F.R. § 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)

☒ 37 C.F.R. § 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a)).

☒ 37 C.F.R. § 1.17 (application processing fees)

**NOTE:** ". . . A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).

☐ 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b))

**NOTE:** Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. § 1.311(b).

**NOTE:** 37 C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . . the issue fee. . . ." From the wording of 37 C.F.R. § 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

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**16. Instructions as to Overpayment**

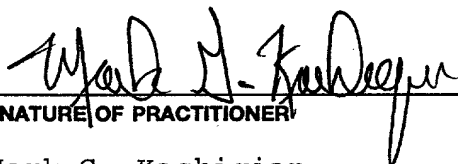
NOTE: "... Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).

☒ Credit Account No. 08-1500  
☐ Refund

Reg. No. 32,840

Tel. No. (918) 587-2000

Customer No.

  
SIGNATURE OF PRACTITIONER

Mark G. Kachigian  
(type or print name of attorney)

228 West 17th Place  
P.O. Address

Tulsa, OK 74119

(New Application Transmittal [4-1]—page 10 of 11)

**☒ Incorporation by reference of added pages**

*(check the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. stage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED)*

- ☒ Plus Added Pages for New Application Transmittal Where Benefit of Prior ~~U.S.~~ U.K. Application(s) Claimed

Number of pages added \_\_\_\_\_

- ☐ Plus Added Pages for Papers Referred to in Item 4 Above

Number of pages added \_\_\_\_\_

- ☐ Plus added pages deleting names of inventor(s) named in prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.

Number of pages added \_\_\_\_\_

- ☐ Plus "Assignment Cover Letter Accompanying New Application"

Number of pages added \_\_\_\_\_

☐ **Statement Where No Further Pages Added**

*(if no further pages form a part of this Transmittal, then end this Transmittal with this page and check the following item)*

- ☐ This transmittal ends with this page.

**18. Relate Back—35 U.S.C. 119 Priority Claim for Prior Application**

The prior U.S. application(s), including any prior International Application designating the U.S., identified above in item 17B, in turn itself claim(s) foreign priority(ies) as follows:

GB	9903220.3	12 February 1999
Country	Appln. no.	Filed on

The certified copy(ies) has (have)

☐ been filed on \_\_\_\_\_, in prior application 0 / \_\_\_\_\_, which was filed on \_\_\_\_\_.

☒ ~~is/are attached~~ will follow

**WARNING:** The certified copy of the priority application that may have been communicated to the PTO by the International Bureau may not be relied on without any need to file a certified copy of the priority application in the continuing application. This is so because the certified copy of the priority application communicated by the International Bureau is placed in a folder and is not assigned a U.S. serial number unless the national stage is entered. Such folders are disposed of if the national stage is not entered. Therefore, such certified copies may not be available if needed later in the prosecution of a continuing application. An alternative would be to physically remove the priority documents from the folders and transfer them to the continuing application. The resources required to request transfer, retrieve the folders, make suitable record notations, transfer the certified copies, enter and make a record of such copies in the Continuing Application are substantial. Accordingly, the priority documents in folders of international applications that have not entered the national stage may not be relied on. Notice of April 28, 1987 (1079 O.G. 32 to 46).

**19. Maintenance of Copendency of Prior Application**

**NOTE:** The PTO finds it useful if a copy of the petition filed in the prior application extending the term for response is filed with the papers constituting the filing of the continuation application. Notice of November 5, 1985 (1060 O.G. 27).

A. ☐ Extension of time in prior application

(This item must be completed and the papers filed in the prior application, if the period set in the prior application has run.)

☐ A petition, fee and response extends the term in the pending prior application until \_\_\_\_\_.

☐ A copy of the petition filed in prior application is attached.

B. ☐ Conditional Petition for Extension of Time in Prior Application

(complete this item, if previous item not applicable)

☐ A conditional petition for extension of time is being filed in the pending prior application.

☐ A copy of the conditional petition filed in the prior application is attached.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: Unknown )  
)  
Filing Date: Unknown )  
)  
Priority Date: 12 Feb 1999 )  
)  
Applicant: Paul Entwistle )  
)  
For: IMPROVEMENTS RELATING )  
TO TELEVISION GUIDE SYSTEM )

**PRELIMINARY AMENDMENT**

Assistant Commissioner For Patents  
Box: New Application  
Washington, D.C. 20231

Dear Sir:

This is a preliminary amendment to the enclosed application entitled "Improvements Relating To Television Guide System". Please amend the specification as follows:

Before the first paragraph on page 1, please insert

**--CROSS-REFERENCE TO RELATED APPLICATIONS**

This application claims priority to GB Application No. 9903220.3 filed 12 February 1999.

**BACKGROUND OF THE INVENTION--;**

On page 2 before line 3 insert the following heading:

**--SUMMARY OF THE INVENTION--;**

Page 4 before line 28 insert the following heading:

**-- BRIEF DESCRIPTION OF THE DRAWINGS--**

Page 5 before line 8 insert the following heading:

**--DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT--;**

Page 8 after line 5 add the following:

--While the invention has been described with a certain degree of particularity, it is manifest that many changes may be made in the details of construction and the arrangement of components without departing from the spirit and scope of this disclosure. It is understood that the invention is not limited to the embodiments set forth herein for purposes of exemplification, but is to be limited only by the scope of the attached claim or claims, including the full range of equivalency to which each element thereof is entitled.--

Please amend the claims as follows:

Claim 2, line 2, delete "characterised in that" and insert --wherein--;

Claim 3, line 2, delete "characterised in that" and insert --wherein--;

Claim 4, line 2, delete "characterised in that the" and insert --wherein--;

Claim 5, line 2, delete "characterised in that" and insert --wherein--;

#### REMARKS

The application should now be in condition for examination, which is respectfully requested.

Respectfully Submitted

HEAD, JOHNSON & KACHIGIAN

Dated: January 20, 2000

BY: Mark G. Kachigian  
Mark G. Kachigian, Reg. No. 32,840  
228 West 17th Place  
Tulsa, Oklahoma 74119  
(918) 584-4187  
Attorneys for Applicant

## Improvements Relating to Television Guide System

The invention to which this invention relates is to the generation and control of an electronic programme guide (EPG) of the type which is generated on a television display screen and transmitted and received from a remote broadcast location.

An EPG and data relating to the same is typically transmitted at regular intervals or continuously to allow the guide to be generated and displayed and/or updated as required. The EPG is an increasingly important requirement in television broadcasting systems as the number of channels which can be received increases. The EPG systems are frequently improved as the guide or the broadcast systems upon which the same are carried are improved and progressed and usually include a series of bars and columns in a grid format which includes a series of cells, each of the cells indicating a particular programme, typically including an indication of the title, and each of the cells is positioned with respect to a time indication and a channel indication so as to provide to the user an indication of where and when they can view various programmes.

One problem is the increased ability to control the display of programmes at the viewer location to suit the viewer's wishes. This means that if, for example, the viewer is watching a programme and wishes to interrupt the programme but not miss the remainder of the programme they can decide to store in the local memory of the apparatus the remainder of the programme, and then recommence viewing of the stored programme at the desired time. This feature may be of particular importance in the future and the problem with this is that the delaying of the transmission of the programme at a location means that the display of the programme at that location and subsequent programmes, are then out of synchronisation with

the EPG data and information which is transmitted to that location. This can be confusing and/or irritating to the viewer.

The aim of the present invention is to provide a system whereby the localised delaying or altering of the viewing of a programme is taken into account in the generation of the electronic programme guide at that location or locations.

In a first aspect of the invention there is provided television data receiving apparatus which allows the display of a series of programmes at at least one location from data received, means for receiving data relating to and for generating an electronic programme guide at said location, which guide indicates the schedule of programmes and other information which can be displayed via the apparatus and means whereby the display of a programme or programmes can be delayed and or interrupted and data received for the remaining programme and/or subsequent programmes stored in a memory means for selective display at a later time and characterised in that the electronic programme guide at that location is adjusted in response to the delay in display of the remainder of the programme and/or subsequent programmes so as to provide synchronisation of the adjusted electronic programme guide details with the display of the remainder of the programme and/or subsequent programmes.

Thus, according to the invention, the schedule of the electronic programme guide is linked to the use of the local memory in the apparatus so as to automatically reflect scheduling adjustments caused by the time shifting of broadcast programmes by the user of the apparatus at a specific location rather than the broadcaster of the data. The inclusion of programme delay means and memory in set top boxes provides the ability to pause a broadcast programme and continue watching the same later to be possible and this has



given rise to the problem of displaying the start and end times of the programme in an EPG accurately as the start and end times are adjusted in response to the local viewer operation of the storage device instead of the original transmission schedule.

By providing for the automatic and interactive modification and presentation of the EPG schedule at specific locations so as to represent the time shifting which may occur in the display of the remainder of a programme or subsequent programmes, so the EPG can be kept in synchronisation with the viewing schedule at that users location and display to the user the correct start and end times. This allows the user to organise their viewing knowing when time displaced broadcast programme and subsequent programmes will finish. Furthermore, they can schedule to watch, for example, a particular programme whilst pausing another which they were previously watching and then restarting the original programme and the EPG will adjust accordingly. The method of automatic temporal shifting within the EPG allows the selection to be made by locally processing and adjusting the broadcast schedule.

In one embodiment the electronic programme guide generating means receives a first signal to indicate the commencement of a delay in broadcast of programme data and commencement of storage of the same in the memory and a second signal to indicate when the viewing of the said data recommences and adjusts the electronic programme guide to take into account the time period between said first and second signals. Typically, the said signals or additional signals are received by the means for generating the electronic programme guide and indicate the particular programme and channel which has been selectively delayed by the user, so as to allow the EPG to be adjusted accordingly with respect to the appropriate channel and programme.

Typically the electronic programme guide is adjusted by generating an additional display feature which indicates the actual viewing schedule of the user, including any delays in viewing of programmes. In one embodiment the electronic programme guide is displayed as a grid with a number of rows, each indicating a channel and located with respect to a time band, and if a selected delay of a programme is made by the user an additional row is generated on the electronic programme guide to indicate the real time viewing schedule for the user at that apparatus location and including the delay.

In a further aspect of the invention there is provided television programme data receiving apparatus which allows the display of a series of programmes at at least one location from data received, means for receiving data relating to and for generating an electronic programme guide at said location, which guide indicates the schedule of programmes and other information which can be displayed via the apparatus and means whereby the display of a programme or programmes can be selectively delayed and or interrupted by the user of the apparatus at the location and data which is then received for the remaining programme and/or subsequent programmes which have been delayed stored in a memory means for selective display on the apparatus at a later time and characterised in that the electronic programme guide at that location is adjusted in response to the localised delay in display of the remainder of the programme and/or subsequent programmes so as to synchronise the adjusted electronic programme guide details to take into account the delay in display of programme material.

Specific embodiments of the invention will now be described with reference to the accompanying diagrams wherein:-

Figure 1 indicates a typical EPG schedule;

Figure 2 indicates the schedule of Figure 1 with highlighted viewing choices;

Figure 3 illustrates the adjustments to the EPG made in one embodiment of the invention;

Figure 4 illustrates an alternative embodiment of an EPG according to the invention; and

Figure 5 illustrates a yet further embodiment of the invention.

It is possible for a user to record or store data onto a memory means such as a hard disc drive, (HDD), provided in or connected with data receiving apparatus at their premises. The data can relate to a particular programme or programmes on a particular channel or the like whilst it is being viewed. This allows the viewer to pause and then recommence watching that channel by locally storing the broadcast channel data which is received during the pause or delay in viewing. When the user selects to continue viewing the programme is generated from the data which is stored in the HDD and recommences at the point in the programme where the pause occurred and is then viewed by the viewer. The writing of programme material which has been transmitted and received in that time is contained and stored in a time buffer. The buffer therefore represents time shifted programme material such as an entire broadcast channel or potentially multiplex channels and in accordance with the invention the EPG which is generated reflects the fact that the programme material associated with a channel needs to be locally offset by the time buffer so that the EPG reflects the schedule for that particular user which has been changed due to the selection of the delay function and therefore differs from

the EPG schedule which would be generated from the data transmitted to all user locations by the broadcaster.

In accordance with the invention the EPG generation means can identify the time delay from data signal received from the memory means and can also identify the location in terms of channel and programme of the data which has been stored during the delay. One possibility is to represent this by "slipping" the row of the EPG display which relates to the channel which has been delayed and the extent of this "slippage" is determined by the buffer quantity i.e. the length of the delay. A further enhancement can be to display the original channel row timings as that is still accessible to be viewed immediately by the viewer and the data for this is still received from the broadcaster, and generate an additional channel which reflects the contents of the HDD or memory means so as to illustrate to the viewer the extent of delay and allow the viewer to select which source to watch. A yet further embodiment is to represent the duration of programmes as rectangular areas and to illustrate displacement through use of the delay facility by diagonal lines which highlight the skew between the broadcast and the stored schedules at the particular location. A yet further embodiment is to only show the time displacement of an individual programme on that channel rather than the whole channel so that for example if a film is paused to watch the news, the EPG displays the skewed end time of the film only and allows further viewing planning to be undertaken.

Figure 1 illustrates one example and illustrates a typical EPG schedule for 3 channels, namely Ch1, Ch2 and Ch3 and shows the schedule of programmes from 7 o'clock to 9 o'clock. Normally, the user or viewer of the EPG will highlight the viewing choices, as shown in Figure 2, so that, for example, between 7 and 7.30 they are watching channel 1, then between 7.30 and 8.30 channel 2 and wish

to watch the news at 8.00 and music at 9.00 on channel 3. It will be seen however that these selections overlap but by using the storage system of the apparatus the film on channel 2 can be interrupted and delayed by the user so that the news on channel 3 can be watched at the appropriate time as shown in figure 3. The viewing of the film is continued with the display generated from the data held on the memory means at the data receiver at the user location so that the end of the film can be watched. However due to the delay the users viewing schedule is then out of synchronisation with the schedule of figure 2, so that the film in fact ends at 9 o'clock in reality as shown in Figure 3 as opposed to 8.30 shown in Figure 2. Thus, with Figure 3, the EPG schedule is locally reprocessed to reflect the new viewing times, i.e. the film is delayed from starting until the selection on channel 1 is complete and thus the start of the film is stored in the local memory. When the film is started from the memory then the viewing of that is interrupted by the insertion of the news from Channel 3 which is shown live and the remainder of the film is paused until the news has finished and viewing then recommences.

An alternative method of displaying the process schedule data is shown in Figure 4 which shows a "slipped" channel representation which represents the data which is being stored on the HDD memory. Thus, it is shown that in Channel 1 the term "Some TV" is being watched and a film has started on Channel 2 while Channel 1 was being watched but the new line "HDD" indicates when the actual film started as it was previously being stored in the HDD memory means and so represents to the viewer the change in schedule.

A yet further alternative arrangement is shown in Figure 5 wherein a static selected viewing channel can be displayed that always remains visible even when the channels are scrolled down so that in figure 5

it is shown that the top line indicates the highlighted viewing which is "some TV" followed by "film" followed by "news" followed by "film" and then music while the remainder of the schedule indicates to the viewer what changes have occurred in the EPG schedule as a result of the viewing which has taken place.

## Claims

1. Television data receiving apparatus which allows the display of a series of programmes at at least one location from data received, means for receiving data relating to and for generating an electronic programme guide at said location, which guide indicates the schedule of programmes and other information which can be displayed via the apparatus and means whereby the display of a programme or programmes can be delayed and or interrupted and data received for the remaining programme and/or subsequent programmes stored in a memory means for selective display at a later time and characterised in that the electronic programme guide at that location is adjusted in response to the delay in display of the remainder of the programme and/or subsequent programmes so as to provide synchronisation of the adjusted electronic programme guide details with the display of the remainder of the programme and/or subsequent programmes.

2. Television data receiving apparatus according to claim 1 characterised in that the schedule generated for the electronic programme guide is linked to the use of the local memory at the location and display so as to automatically reflect scheduling adjustments caused by the time shifting of broadcast programmes by the user selecting to delay the display of a programme.

3. Television data receiving apparatus according to claim 1 characterised in that the electronic programme guide generating means receives a first signal to indicate the commencement of a delay in broadcast of programme data and commencement of storage of the same in the memory and a second signal to indicate when the viewing of the said data recommences and adjusts the electronic programme

guide to take into account the time period between said first and second signals.

4. Television data receiving apparatus according to claim 3 characterised in that the said signal or additional signals are received by the means for generating the electronic programme guide and indicate the particular programme and channel which has been selectively delayed by the user.
5. Television data receiving apparatus according to claim 1 characterised in that the electronic programme guide is adjusted by generating an additional display feature which indicates the actual viewing schedule of the user, including any delays in viewing of programmes.
6. Television data receiving apparatus according to claim 5 wherein the electronic programme guide is displayed as a grid with a number of rows, each indicating a channel and located with respect to a time band, and if a selected delay of a programme is made by the user an additional row is generated on the electronic programme guide to indicate the real time viewing schedule for the user at that apparatus location and including the delay.
7. Television programme data receiving apparatus which allows the display of a series of programmes at at least one location from data received, means for receiving data relating to and for generating an electronic programme guide at said location, which guide indicates the schedule of programmes and other information which can be displayed via the apparatus and means whereby the display of a programme or programmes can be selectively delayed and or interrupted by the user of the apparatus at the location and data which is then received for the remaining programme and/or



subsequent programmes which have been delayed stored in a memory means for selective display on the apparatus at a later time and characterised in that the electronic programme guide at that location is adjusted in response to the localised delay in display of the remainder of the programme and/or subsequent programmes so as to synchronise the adjusted electronic programme guide details to take into account the delay in display of programme material.

**Abstract**

The invention relates to the generation of an Electronic Programme Guide (EPG) from data transmitted to a receiver location. The EPG is generated from the data for display on a screen. The receiver of the data for the programmes to be displayed and to which the EPG relates is capable of interrupting the display of the programmes and saving the data in a memory for subsequent display at a later time. The present invention ensures that the EPG data is adjusted in accordance with the data held in the memory so as to continue to be synchronised with the programmes which can be displayed.

Figure 1

7.00		7.30		8.00		8.30		9.00	
Ch1	Some TV		Next programme ...					Even more ..	
Ch2	.....	Film starts .....					.....		
Ch3	Soap ...			News	Even more soap ....			Music	

7.00		7.30		8.00		8.30		9.00		
Ch1	Some TV		Next programme ...					Even more ..		
Ch2	.....		Film starts .....					.....		
Ch3	Soap ...			News		Even more soap ....			Music	

Figure 2

Figure 3

	7.00	7.30	8.00	8.30	9.00
Ch1	Some TV		Next programme ...		Even more ..
Ch2	.....	Film	Film continues		
Ch3	Soap ...		News	Even more soap ....	Music

	7.00	7.30	8.00	8.30	9.00
Ch1	Some TV	Next programme ...			Even more ..
Ch2	.....	Film starts			.....
hdd	.....	Film starts			
Ch3	Soap ...		News	Even more soap ....	Music

Figure 4

	Some TV	Film	News	Film continues	Music
	7.00	7.30	8.00	8.30	9.00
Ch1	Some TV	Next programme ...			Even more ..
Ch2	.....	Film	Film continues		
Ch3	Soap ...		News	Even more soap ....	Music
Ch44	Old TV ...	Special interest ....		Hobby TV ...	
Ch45	News	Sports ....			
Ch46	Other sports .....				More sport ..

Figure 5

**COMBINED DECLARATION AND POWER OF ATTORNEY**  
(Original, Design, National Stage Of PCT, Supplemental)

As the below named inventor, I hereby declare that:  
This declaration is of the following type:

- ☒ original  
☐ design  
☐ national stage of PCT  
☐ supplemental

My residence, post office address and citizenship are as stated below next to my name, I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

IMPROVEMENTS RELATING TO TELEVISION GUIDE SYSTEM

the specification of which:

(a) ☒ is attached hereto

(b) ☐ was filed on \_\_\_\_\_ as \_\_\_\_\_ or \_\_\_\_\_  
Express Mail No., as Serial No. not yet known \_\_\_\_\_ and was amended by Preliminary amendment

(c) ☐ was described and claimed in PCT International; Application No. \_\_\_\_\_ filed on \_\_\_\_\_  
and as amended under PCT Article 19 on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by the Preliminary Amendment attached hereto.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

☐ In compliance with this duty there is attached an information disclosure statement 37 CFR 1.97.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

(d) ☐ no such applications have been filed.

(e) ☒ such applications have been filed as follows:

COUNTRY	APPLICATION NUMBER	DATE OF FILING	PRIORITY CLAIMED UNDER 37 USC 119
<u>Great Britain</u>	<u>9903220.3</u>	<u>12 February 1999</u>	<u>X</u> YES <input type="checkbox"/> NO

As the below named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Paul H. Johnson, Reg. No. 19,224 and/or Mark G. Kachigian Reg. No. 32,840 and/or Brent A. Capehart Reg. No. 39,620 of the firm of HEAD, JOHNSON & KACHIGIAN 228 West 17th Place, Tulsa, Oklahoma 74119, Telephone Number (918) 587-2000, members of the Bar of the State of Oklahoma, and Robert R. Keegan, Reg. No. 18,614 and/or Daniel R. Alexander, Reg. No. 32,604 and/or Trent C. Keisling, Reg. No. 36,565 of Head, Johnson & Kachigian, 112 West Center Street, Suite 230, Fayetteville, Arkansas, and Martin G. Ozinga, Reg. No. P-44,992 of the firm of Head, Johnson & Kachigian, 204 North Robinson, Suite 3030, City Place Building, 30th Floor, Oklahoma City, Oklahoma 73102, Telephone Number (405) 236-4000, member of the Bar of the State of Oklahoma, to prosecute this application to register, to transact all business in the Patent and Trademark Office in connection therewith, and to receive the Letter Patent Document, if issued.

Address all telephone calls to Mark G. Kachigian at telephone no. (918) 587-2000.

Address all correspondence to Mark G. Kachigian, Head, Johnson & Kachigian, 228 West 17th Place, Tulsa, Oklahoma 74119.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of inventor Paul Entwistle

Inventor's signature

Residence

Citizenship

Post Office Address

P. Entwistle Date 11-1-0  
KANAWHA OUTSIDE LAND  
OXENHOPE, WEST YORKSHIRE, UK  
British Subject